



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10


1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL CLEANUP

MEMORANDUM

SUBJECT: Action Memorandum for the University Place Chemical Emergency Response Site pursuant to the On-Scene Coordinator's delegated authority under Section 104 of CERCLA

FROM: Jeffrey Fowlow, On-Scene Coordinator
Planning and Preparedness Unit
Emergency Management Program

THRU: Calvin Terada, Manager
Emergency Response Unit Manager
Emergency Management Program  2/10/16

TO: Administrative Record
University Place Chemical Emergency Response

I. Purpose

The purpose of this memorandum is to document the decision to initiate emergency removal actions described herein for the University Place Chemical Emergency Response Site (Site) located in University Place, Pierce County, Washington pursuant to the On-Scene Coordinator's delegated authority under Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

II. Site Information

A. Site Description

Site Name:	University Place Chemical Removal
Superfund Site ID (SSID):	10PK
NRC Case Number:	1138494
CERCLIS Number:	WAN001001498
Site Location:	44th Street West University Place, WA 98466
County:	Pierce
Lat/Long:	Latitude: 47.2168220 Longitude: -122.5477450
Potentially Responsible Party (PRP):	Neil Holland (deceased)
Access:	Unrestricted
NPL Status:	Not listed or proposed for listing
Removal Start Date:	January 20, 2016

B. Site Background

1. Removal Site Evaluation

On January 19, 2016, the Washington Department of Ecology (Ecology) requested assistance from the EPA in order to remove hazardous chemicals from a private residence located in a residential neighborhood of University Place, Washington. Chemicals were being stored on the property inside and outside of a separated garage and storage shed. The homeowner had been storing chemicals for a friend who passed away in July 2015. The homeowner was unaware of the dangers associated with storing the chemicals. Once the homeowner determined that the chemicals could pose a danger, he contacted local law enforcement who, after assessing the property, contacted federal law enforcement agencies and Ecology. The deceased owner of the chemicals located here was previously the potentially responsible party at the East 11th Street Chemical Fire Site where EPA conducted an emergency response in March 2012.

EPA and its emergency response contractors mobilized to the Site on January 20, 2016. An initial assessment confirmed the presence of improperly stored containers of various hazardous substances in the garage, shed, and outside the residence. Among the chemicals observed at the Site were over 70 pounds of sodium metal and hydrofluoric acid, the latter of which is defined as extremely hazardous substances (EHS) under the federal Emergency Planning and Community Right-To-Know Act (EPCRA). Sodium metal reacts with water causing emission of flammable gases which can cause burns to human tissue and ignite spontaneously. Hydrofluoric acid is corrosive to metals and can result in formation of hydrogen gas in containers and piping to create an explosion hazard. It is very hazardous if coming into contact with skin or if inhaled. Other hazardous substances identified at the Site include: sodium cyanide, mercuric nitrate, ammonium chloride, cadmium nitrate, chromium sulfate, and potassium permanganate. A full list of chemicals found at the Site is included at the end of this memorandum (Attachment 1).

2. Physical location and Site characteristics

The Site is located in a residential neighborhood within the City of University Place, Pierce County, Washington (Figure 1). The majority of the surrounding land use is represented by low to moderate density residential use with approximately 12,000 people living within a 1-mile radius of the Site. The Site sits within one quarter mile of two schools and two churches and within a half mile of a commercial area (Figures 1 and 2).

Containers were stored on the Site inside and outside of the garage and storage shed. Access to the structures was available to EPA personnel and contractors directly via the driveway and footpaths with entry available through standard doorways. Some containers were organized on shelves, while others were discarded into piles on the floor mixed with other materials. Some containers were stored outdoors in a poly overpack drum.

3. Release or threatened release into the environment of a hazardous substance, pollutant or contaminant.

Many chemicals identified at the site are hazardous substances as defined by Section 101(14) of CERCLA, including sodium, hydrofluoric acid, mercuric nitrate, ammonium oxalate, and cyanide. A total of 242 containers of chemicals were observed in the garage storage shed and outside immediately adjacent to the garage. EPA observed improper storage of chemical containers including improper labeling, storage of chemicals in food containers, and the storage of incompatible chemicals next to one another. EPA determined that the quantities and improper storage of the chemicals posed a threat of release into the environment and a threat to public health or welfare of the United States.

Some specific hazards observed included: Sodium metal is a flammable solid and corrosive. It emits flammable gases and can be extremely explosive when coming in contact with water. Seventy-nine pounds of sodium metal were present at the Site. Potassium metal, though not a CERCLA hazardous substance, has the potential for even stronger reactions with water than sodium, thus potentially posing an even greater safety hazard. Fifteen pounds of potassium metal were present at the Site. Hydrofluoric acid is corrosive to metals and can result in formation of hydrogen gas in containers and piping to create an explosion hazard. It is very hazardous if coming into contact with skin or if inhaled. Five gallons of hydrofluoric acid were present at the Site. Mercuric nitrate is toxic and is fatal if swallowed, inhaled or comes in contact with skin. Eighty-one pounds of mercuric nitrate were present at the Site. A complete list of chemicals inventoried at the Site is attached (Attachment 1).

The chemicals were not being actively managed or properly stored. The homeowner had no experience handling chemicals and requested assistance stabilizing and removing them safely.

III. Threats to Public Health Welfare or the Environment

A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants.

The conditions at the Site met the following factors which indicate that the Site was a threat to public health or welfare of the United States or the environment and removal action is appropriate under 40 C.F.R. § 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

B. Applicable factors (from 40 C.F.R. § 300.415) which were considered in determining the appropriateness of a removal action:

1. Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].

Flammable, oxidizing, corrosive, and toxic substances at the Site presented a threat of exposure to the resident at the Site, residents at adjacent properties, and visitors to these properties. Access to the Site is only partially limited by an incompletely fenced yard; furthermore the shed was open, and containers were left outdoors. Hazardous substances at the Site were not secure from access by visitors to the property or trespassers.

2. Threat of fire or explosion [300.415(b)(2)(vi)].

Incompatible flammable and oxidizing substances at the Site that were stored in close proximity to each other and not actively managed presented a threat of fire or explosion to the residence and adjacent residences. The presence of water-reactive chemicals at the Site also presented a substantial risk to fire-fighters and area residents if a fire had occurred.

3. The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)].

State and local authorities did not have the available resources or appropriate authorities to remove the chemical hazards from the Site. State and local authorities requested EPA assistance because there were no known other appropriate federal or state response mechanisms capable of providing the appropriate resources in the prompt manner needed to address the potential human health threats described herein.

IV. Selected Removal Action and Estimated Costs

A. Situation and Removal Activities to Date

1. Current Situation.

A total of 242 containers of chemicals were observed at the Site. The homeowner was storing the chemicals for a friend, who died in July 2015. The homeowner was not aware of the danger involved with the chemicals left behind by his friend. Once the homeowner

determined that the chemicals could pose a danger, he was eager to have the chemicals safely removed from his property and possession.

2. Removal activities to date:

There have been no government or private cleanup actions previously undertaken at the Site.

3. Enforcement

See attached confidential enforcement addendum.

B. Planned Removal Actions

1. Proposed action description

The emergency removal action described herein was initiated on January 20, 2016 and completed on January 21, 2016. EPA directed contractors to characterize, segregate, and secure compatible materials and arrange for transportation and disposal of all chemicals. Material that was factory sealed and clearly labeled as a CERCLA hazardous substance was segregated, while all other known or suspected hazardous substances were analyzed using field testing techniques and categorized into appropriate hazard classifications. A total of 242 chemical containers were placed into 12 overpack drums, which were transported to a disposal facility on January 21, 2016.

2. Contribution to remedial performance

The Site is not listed or proposed for listing on the National Priorities List (NPL). The subject response action described in this memorandum is an emergency response removal to remove hazardous substances at the Site. The interim action will not impede any future removal or remedial action at the Site should new information indicate such an action is needed in the future.

3. ARARs

The NCP requires that removal actions attain Applicable or Relevant and Appropriate Requirements (ARARs) under federal or state environmental or facility siting laws, to the extent practicable. In determining whether compliance with ARARs is practicable, EPA may consider the scope of the removal action and the urgency of the situation [40 CFR §300.415(j)].

Resource Conservation and Recovery Act (RCRA) [42 U.S.C. § 6901],
Subtitle "C" - Hazardous Waste Management [40 C.F.R. Parts 260 to 279].

Federal hazardous waste regulations specify hazardous waste identification, management, and disposal requirements. For the management of RCRA hazardous wastes that are not Bevill-exempt, applicability of Subtitle C provisions depend on whether the waste is managed within an Area of Contamination (AOC). 55 FR 8760 (Mar. 8,

1990). Applicable or relevant and appropriate requirements of RCRA Subtitle C (or the state equivalent) may be satisfied by off-site disposal, consistent with the Off-Site Rule, 40 C.F.R. § 300.440. RCRA Subtitle C also provides treatment standards for debris contaminated with hazardous waste ("hazardous debris"), 40 C.F.R. § 268.45, although the lead agency may determine that such debris is no longer hazardous, consistent with 40 C.F.R. § 261.3(f)(2), or equivalent state regulations.

4. Project Schedule

The emergency response removal action needed to be initiated as soon as possible. The presence of chemical containers that were improperly stored, not actively managed, and stored in unsecured structures necessitated immediate action. EPA mobilized to the Site on January 20, 2016 and completed all removal activities by January 21, 2016.

C. Estimated Costs*

Contractor costs (ERRS/START staff, travel, equipment)	\$30,000
Other Extramural Costs (Strike Team, other Fed Agencies)	
Contingency costs (20% of subtotal)	\$6,000
Total Removal Project Ceiling	\$36,000

*EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA.

V. Expected Change in the Situation Should Action Be Delayed or Not Taken

A delay in action or no action at this Site would have increased the actual or potential threats to the public health and/or the environment.


VI. Outstanding Policy Issues

None.

VII. Approvals

This decision document represents the selected emergency response removal action for this Site, developed in accordance with CERCLA, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b) criteria for a removal action and through this document, I am approving the proposed removal actions described herein. The total project ceiling is \$36,000 this amount will be funded from the Regional removal allowance.


Jeffrey Fowlow
Federal On-Scene Coordinator

2-10-2016
Date

Figure 1: University Place Chemical Removal Site Location

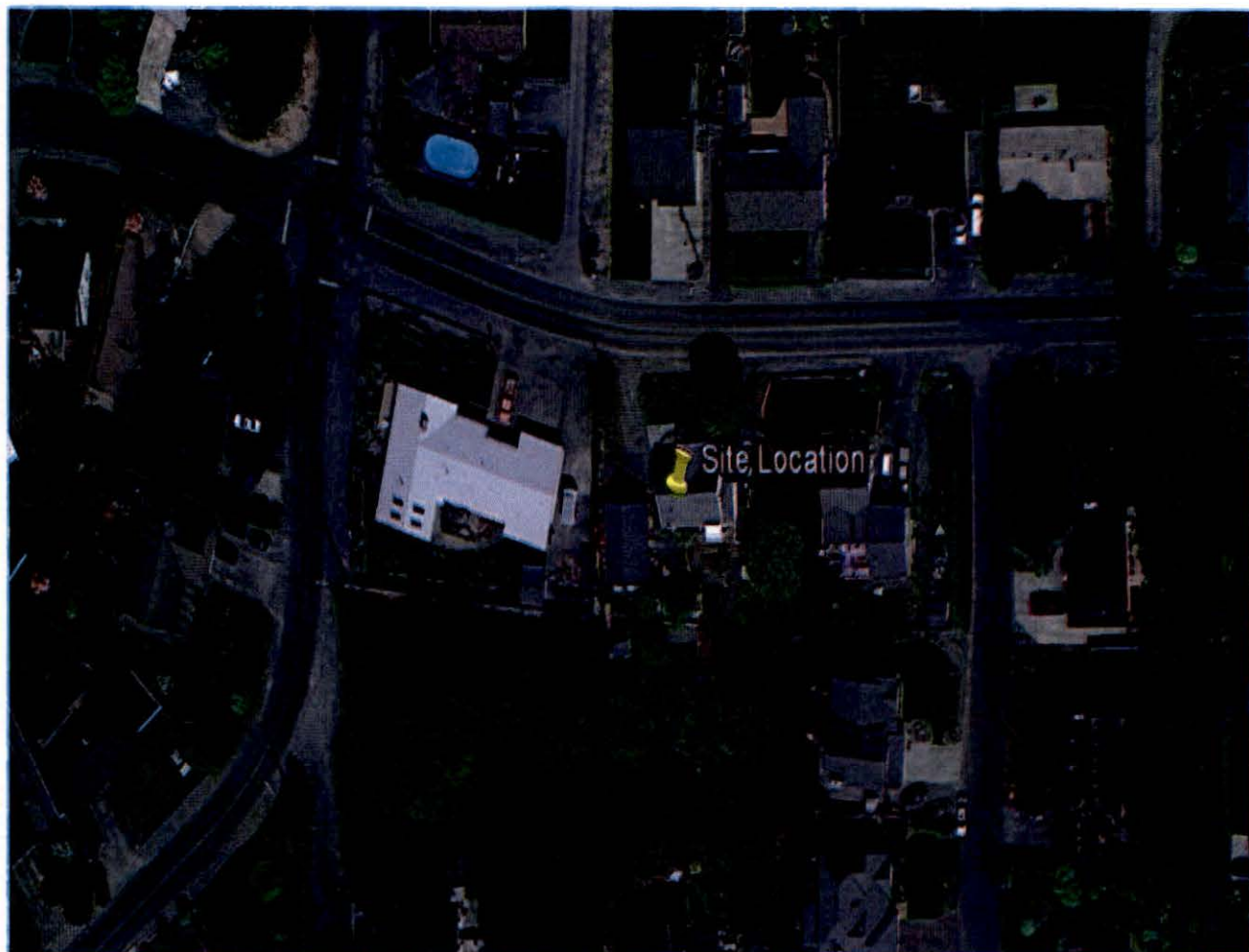
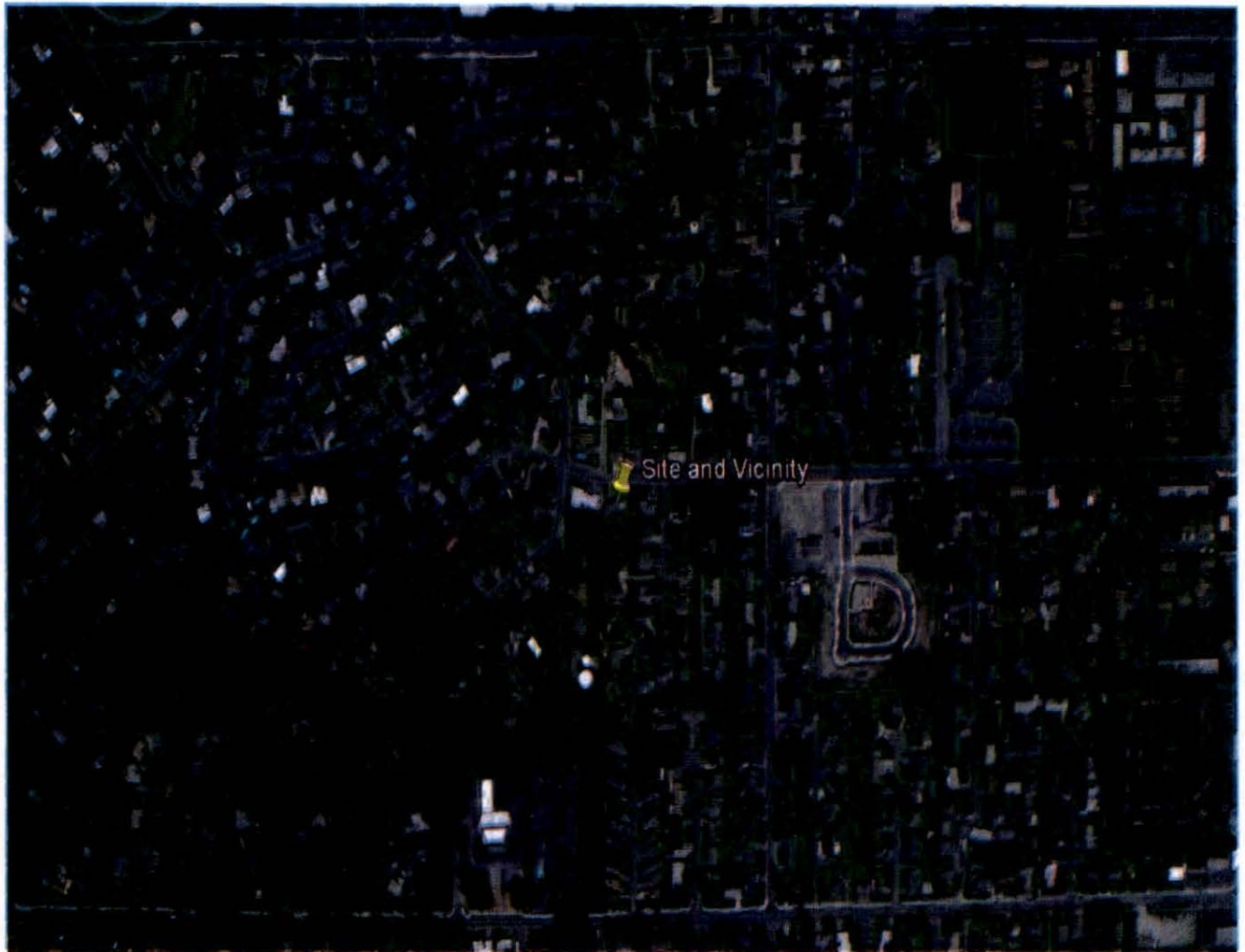


Figure 2: University Place Chemical Removal Site and Vicinity



ATTACHMENT 1: INVENTORY OR DISPOSED CHEMICALS, UNIVERSITY PLACE CHEMICAL REMOVAL

Date	Description	Hazard Class	Hazard Class Description	EPCRA/ CERCLA List of List	State	Quantity	Container Size	Waste Amount (lbs)
1/20/2016	Aluminum Powder	4.3	Dangerous When Wet	Yes	Solid	1	p/gal	4.5
1/20/2016	Aluminum Powder	4.3	Dangerous When Wet	Yes	Solid	1	p/gal	1.5
1/20/2016	Aluminum Powder	4.3	Dangerous When Wet	Yes	Solid	1	p/gal	2.5
1/20/2016	Aluminum Powder	4.3	Dangerous When Wet	Yes	Solid	1	p/gal	1
1/20/2016	Aluminum Powder	4.3	Dangerous When Wet	Yes	Solid	1	p/gal	1
1/20/2016	Ammonium chloride	6.1	Toxic and Infectious Substance	Yes	Solid	1	bag	2
1/20/2016	Ammonium oxalate	6.1	Toxic and Infectious Substance	Yes	Solid	1	bag	13
1/20/2016	Barium Chloride	5.1	Oxidizer	Yes	Solid	6	bag	550 g
1/20/2016	Barium Chloride	5.1	Oxidizer	Yes	Solid	1	bag	7.5
1/20/2016	Barium hydroxide	5.1	Oxidizer	Yes	Solid	1	p/gal	1
1/20/2016	Barium Nitrate	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	1.5
1/20/2016	Chromium Sulfate	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	57
1/20/2016	Cyanide	6.1	Toxic and Infectious Substance	Yes	Solid	2	p/gal	
1/20/2016	Hydrofluoric Acid #001	6.1	Toxic and Infectious Substance	Yes	Liquid	1	p/gal	5
1/20/2016	Lead carbonate	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	1
1/20/2016	Lead Chloride	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	15
1/20/2016	Lead Nitrate	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	Yes	Solid	1	bag	20.5
1/20/2016	Lead Nitrate	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	Yes	Solid	1	bag	42
1/20/2016	Mercuric Nitrate	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	Yes	Solid	1	bag	19.5
1/20/2016	Mercuric Nitrate	6.1	Toxic and Infectious Substance	Yes	Solid	1	bag	19
1/20/2016	Mercuric Nitrate	9	Miscellaneous	Yes	Solid	1	bag	17
1/20/2016	Mercuric Nitrate	9	Miscellaneous	Yes	Solid	1	bag	18
1/20/2016	Mercuric Nitrate	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	Yes	Solid	1	bag	8
1/20/2016	Potassium Chromate	9	Miscellaneous	Yes	Solid	1	p/gal	1
1/20/2016	Potassium Chromate	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	1
1/20/2016	Potassium permanganate	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	100g
1/20/2016	Sodium	6.1	Toxic and Infectious Substance	Yes	Solid	1	550 grams	1
1/20/2016	Sodium Cyanide	8(6.1)	Corrosive, Toxic and Infectious Substance	Yes	Solid	2	p/gal	
1/20/2016	Sodium Metal	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	35

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Date	Description	Hazard Class	Hazard Class Description	EPCRA/ CERCLA List of List	State	Quantity	Container Size	Waste Amount (lbs)
1/20/2016	Sodium Metal	4.1	Flammable Soild	Yes	Solid	1	p/gal	23
1/20/2016	Sodium Metal	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	21
1/20/2016	Zinc Powder	6.1	Toxic and Infectious Substance	Yes	Solid	1	p/gal	1
1/20/2016	Zinc Powder	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	Yes	Solid	1	g/oz	1oz
1/20/2016	Ammonium	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	2	p/gal	2
1/20/2016	Ammonium Nitrate	4.3	Dangerous When Wet	No	Solid	1	p/gal	2
1/20/2016	Ammonium Nitrate	4.1	Flammable Soild	No	Solid	1	p/gal	2
1/20/2016	Ammonium Nitrate	4.1	Flammable Soild	No	Solid	1	p/gal	5
1/20/2016	Asphalt powder	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	5.5
1/20/2016	Asphalt powder	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	1.5
1/20/2016	Cadmium Nitrate	6.1	Toxic and Infectious Substance	No	Solid	1	bag	24
1/20/2016	Cadmium Nitrate	6.1	Toxic and Infectious Substance	No	Solid	1	bag	3.5
1/20/2016	Caffeine	6.1	Toxic and Infectious Substance	No	Solid	1	bag	
1/20/2016	Cellulose Acetate	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	20
1/20/2016	Cellulose Acetate	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	44
1/20/2016	Cesium Nitrate	4.3	Dangerous When Wet	No	Solid	1	bag	26
1/20/2016	Decessant Socks	4.3	Dangerous When Wet	No	Solid	3	SOCKS	9
1/20/2016	Glue	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	bag	1
1/20/2016	Iron oxide	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	p/gal	5
1/20/2016	Iron Powder	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	p/gal	10
1/20/2016	Lithium	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	p/gal	7
1/20/2016	Magnesium Alloy Pellet	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	p/gal	2.6
1/20/2016	Magnesium Alloy Pellet	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	p/gal	1
1/20/2016	Magnesium Oxalate	5.1(6.1)	Oxidizer, Toxic and Infectious Substance	No	Solid	1	bag	5
1/20/2016	Pentaerythenol	6.1	Toxic and Infectious Substance	No	Solid	1	g/oz	50g
1/20/2016	Potassium Metal	4.1	Flammable Soild	No	Solid	1	p/gal	1
1/20/2016	Potassium Metal	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	1
1/20/2016	potassium Chlorate	6.1	Toxic and Infectious Substance	No	Solid	1	p/gal	1
1/20/2016	potassium Chlorate	4.3	Dangerous When Wet	No	Solid	1	p/gal	3.5

ATTACHMENT 1: INVENTORY OR DISPOSED CHEMICALS, UNIVERSITY PLACE CHEMICAL REMOVAL

Date	Description	Hazard Class	Hazard Class Description	EPCRA/ CERCLA List of List	State	Quantity	Container Size	Waste Amount (lbs)
1/20/2016	Potassium Metal	4.3	Dangerous When Wet	No	Solid	10	p/gal	12.5
1/20/2016	Potassium perchlorate	4.3	Dangerous When Wet	No	Solid	1	p/gal	200g
1/20/2016	red dye	9	Miscellaneous	No	Solid	3	p/gal	0.5
1/20/2016	Sodium Sulfate	1(6.1)(8)	Oxidizer, Toxic and Infectious Substance, Corrosive	No	Solid	1	p/gal	5
1/20/2016	Sodium Tri-oxide	4.3	Dangerous When Wet	No	Solid	1	bag	10
1/20/2016	Strontium Metal	9	Miscellaneous	No	Solid	1	p/gal	5.5
1/20/2016	Talc Powder	4.1	Flammable Soild	No	Solid	1	p/gal	42
1/20/2016	Propoxamine hydride	4.1	Flammable Soild		Solid	1	bag	34
1/20/2016	Thermite	4.1	Flammable Soild		Solid	1	p/gal	0.5
1/20/2016	Thermite	4.1	Flammable Soild		Solid	1	p/gal	0.5
1/20/2016	Titanium Sponges	6.1	Toxic and Infectious Substance		Solid	1	p/gal	2
1/20/2016	Titanium Sponges	4.3	Dangerous When Wet		Solid	1	p/gal	0.1
1/20/2016	Unknown Solid	4.3	Dangerous When Wet		Solid	1	BOX	28